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10/656,375	09/08/2003	Hiroki Kishi	03500.017558	8246

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EXAMINER	
SHAH, PARAS D	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/656,375	KISHI, HIROKI	
	Examiner	Art Unit	
	Paras Shah	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/11/2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10 and 12-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-10, and, 12-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the RCE filed on 10/11/207. Claims 1, 3-10, 12-19 remain pending and have been examined. Claims 2, 11, and 20 have been cancelled. The Applicants' amendment and remarks have been carefully considered, but they are moot in view of new grounds for rejection. The primary reference by Maeda was applied to the newly added limitation.

All previous objections and rejections directed to the Applicant's disclosure and claims not discussed in this Office Action have been withdrawn by the Examiner.

Response to Arguments

2. Applicant's arguments (pages 8-11) filed on 10/11/2007 with regard to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Furthermore, in the previous Arguments filed on 09/13/2007, the Applicants argued that the Kawahara reference was silent on the relationship between the audio data and an image and hence the combination o f the Maeda and Kawahara reference do not teach the limitation of increasing a bit amount in response to the setting. The examiner traverses these arguments by stating that the Maeda reference suggests that the image and audio data are encoded utilizing the ROI (see page 12, [0204]) as seen in the previous rejection. Further, the Kawahara reference teaches the increasing of the bit amount to improve the audio quality. Hence, the combination of the two references teach the limitation were the limitation "in response to the setting" has been shown and taught in the Maeda reference. The utilization of the increase in bit amounts taught by

Kawahara will allow enhanced audio during ROI regions when in combination with Maeda.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1,3, 5, 8-10, 12, 14, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda (US PGPub 2001/0048770, 12/06/2001) in view of Kawahara (US 6,393,393).

As to claim 1, Maeda teaches an image processing apparatus comprising:

image encoding means for encoding image data (see page 4, [0080], line 19) inputted (see page 4, [0080], line 2) (e.g. The reference uses MPEG-4 data that is already encoded); audio data encoding means) (see page 12, [0204], line 1-3) for encoding audio data inputted together with the image data (see page 12, [0204], line 2);

image encoding setting means (see page 2, [0026], lines 3-4) for setting the encoding said image encoding means to encode the image data (e.g. Specifying an ROI of the moving image as being set by the reference and has

been known to be of higher quality) so that a scene exhibiting a high degree of significance is encoded with a high image quality (see page 1, [0007], lines 1-3 and [0249])); and

audio data encoding setting means (see page 2, [0026], lines 3-4) for setting said audio encoding method in said audio data encoding means to process the audio data (see page 12, [0204], line 1-3) (e.g. It should be note that in the reference the audio data is appended with the image data. Further, the applicant regards the audio setting means as the ROI setting done for the image and since the audio is appended it is inherent that the audio data will be affected for specific region. The audio data is encoded by a MPEG4 encoder).

data integration means for integrating (see Figure 24, multiplexer 2414), in a predetermined order (see [0202] and [0214], shaping done based on JPEG 2000 format), data of the frame images with the high image quality (see Figure 24, output of 2407 to mask encoder 2412 and input into 2414) in accordance with the setting by said image encoding setting means (see Figure 24, mask encoder 2412 and [0202], ROI shape and position information) and encoded audio data by said audio encoding means (see Figure 24, output of entropy encoder 2413 and input into multiplexer.) corresponding to the period of the frame images encoded with high image quality, and outputting the integrated data (see Figure 24, output of multiplexer 2414 and input into code output unit 2415.).

However, Maeda does not specifically disclose the increase a bit amount of the audio data.

Kawahara does disclose the increase a bit amount of the audio data for high degree of significance (see col. 9, lines 55-67 and col. 10, lines 37-67) (e.g. From the input audio signal, which has been broken down into sub bands on a frame by frame basis (see col. 11, lines 14-15), bit allocation is done corresponding to a audio and a camera (see Figure 1, elements 17, and 19). The bit rates depend upon the band that the specific sub band falls within).

It would have been obvious to one of ordinary skilled in the at the time the invention was made to have modified the image processing taught by Maeda with the increasing of the bit amount of the audio taught by Kawahara. The motivation to have combined the two references involves the ability to produce high quality audio (see Kawahara, col. 2, lines 15-17) as would benefit the image processing apparatus taught by Maeda, which discloses image and audio data corresponding to the ROI. Further, the combination would allow the system taught by Maeda to produce high quality audio for the ROI representing the audio and image.

As to claims 3 and 12, Maeda teaches wherein audio data encoding means executes compression encoding where a larger amount of bits (see Maeda, page 13, [0216], lines 9 and 12) (e.g. In this case, the bits are assigned a value of zero for anything outside of the object region (ROI)) are assigned during

the period for which audio is processed with high acoustic quality (e.g. Since the ROI is being used for the image and the image and audio are synchronized, it is inherent that a higher acoustic quality will be observed by the filling of 0 bits outside of the object region) .

However, Maeda does not specifically disclose the audio setting means setting a larger amount of codes. From the applicant's specification the codes are interpreted as being the output once the bits are assigned, which is seen in the Maeda but not disclosed specifically.

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to set larger amount of codes for the audio during the ROI period. The motivation to have used larger amount of codes include the increase in bits for the audio information in the specified object region than when no audio data is found (see Maeda, page 14, [0236], line 8).

As to claims 5 and 14, Maeda and Kawahara teach wherein

said audio decoding means (see Maeda, Fig. 24, element 2401) includes a plurality of audio data encoding circuits (see Maeda, Fig. 24, elements 2401 and 2413) and executed compression-encoding processing (see Maeda, Figure 24, element 2401) (e.g. The MPEG4 encoder already encodes the audio data beforehand) by adaptively selecting outputs of said plurality of audio data encoding circuits (e.g. It is seen that once the object region is specified (ROI) the encoded audio will switch between the MPEG4 encoded data to the entropy

encoder (see Maeda, page 13, [0218], lines 7-11) depending if audio data is appended) in accordance with the inputted audio data during the period for which the audio data (see Maeda, page 12, [0204], line 1-3) are processed with the high acoustic quality in accordance with the setting by said audio data encoding setting means (see Maeda, page 2, [0026], lines 3-4).

As to claims 8 and 17, Maeda and Kawahara teach wherein said image encoding setting means makes the setting so as to encode a partial region of the image (see Maeda. page 15, [0247], line 12-13) (e.g. ROI) data with the high image quality (see Maeda, page 1, [0007], lines 1-3) in accordance with a user's instruction for designating a degree of significance of the image (see Maeda, page 15, [0247], line 14-15) (e.g. It is implied that the user's selection of the ROI shows some type of significance to the image desired).

As to claims 9 and 18, Maeda teaches wherein image encoding setting means makes the ROI setting image (see Maeda, page 15, [0247], line 12-13) in accordance with the user's instruction (see Maeda, page 15, [0247], line 14-15), and wherein said image encoding means executes the ROI encoding (see Maeda, page 15, [0247], line 16-17).

As to claims 10 and 19, Maeda teaches an image processing method comprising:

an image encoding step of inputting a moving image (see\ Maeda, page 9, [0159], lines 1-3) (e.g. It is seen in this reference that moving images are being selected depending on user.) and encoding image data thereof (see page 4, [0080], line 19) inputted (see Maeda, page 4, [0080], line 2) (e.g. The reference uses MPEG-4 data that is already encoded);

audio data encoding means an audio data encoding step of encoding audio data inputted together (see Maeda, page 12, [0204], line 1-3) (e.g. It should be note that in the reference the audio data is appended with the image data. Audio data is encoded by a MPEG4 encoder) with the moving image;

an image encoding setting step of setting the encoding in said image encoding step (see Maeda, page 2, [0026], lines 3-4) to control an image quality of encoded image data in accordance with a partial region in each of frame image of the moving image (see Maeda, page 1, [0007], lines 1-3 and [0249]) (e.g. It is seen from the reference that the image is encoded with a higher quality based on the ROI, where the image data in coded with MSB); and

audio data encoding setting means (see Maeda, page 2, [0026], lines 3-4) for setting said audio encoding method in said audio data encoding means to process the audio data (see Maeda, page 12, [0204], line 1-3) (e.g. It should be note that in the reference the audio data is appended with the image data. Further, the applicant regards the audio setting means as the ROI setting done for the image and since the audio is appended it is inherent that the audio data

will be affected for specific region. The audio data is encoded by a MPEG4 encoder).

data integration step for integrating (see Figure 24, multiplexer 2414), in a predetermined order (see [0202] and [0214], shaping done based on JPEG 2000 format), data of the frame images with the high image quality (see Figure 24, output of 2407 to mask encoder 2412 and input into 2414) in accordance with the setting by said image encoding setting means (see Figure 24, mask encoder 2412 and [0202], ROI shape and position information) and encoded audio data by said audio encoding means (see Figure 24, output of entropy encoder 2413 and input into multiplexer.) corresponding to the period of the frame images encoded with high image quality, and outputting the integrated data (see Figure 24, output of multiplexer 2414 and input into code output unit 2415.).

wherein image encoding setting means (see Maeda, page 2, [0026], lines 3-4) can selectively set a region so the partial region (e.g. Interpreted as ROI.) exhibits high image quality (see Maeda, page 1, [0007], lines 1-3). Further, Maeda and Kawahara disclose an audio data setting means sets the audio encoding method to increase the bit amount of (see Figure 3 and see col. 9, lines 55-67 and col. 10, lines 37-67) the audio data (see Maeda, page 14, [0233], line 10-14) (e.g. It is seen from the reference that the image corresponding to the ROI portion is used and stored and the audio encoded for this image is reproduced by the sound device. Hence, processing of the audio is being done with respect to

the ROI setting and the image for synchronization) corresponding to the setting done by the image encoding setting.

However, Maeda does not specifically disclose the increase a bit amount of the audio data.

Kawahara does disclose the increase a bit amount of the audio data for high degree of significance (see col. 9, lines 55-67 and col. 10, lines 37-67) (e.g. From the input audio signal, which has been broken down into sub bands on a frame by frame basis (see col. 11, lines 14-15), bit allocation is done corresponding to a audio and a camera (see Figure 1, elements 17, and 19). The bit rates depend upon the band that the specific sub band falls within).

It would have been obvious to one of ordinary skilled in the at the time the invention was made to have modified the image processing taught by Maeda with the increasing of the bit amount of the audio taught by Kawahara. The motivation to have combined the two references involves the ability to produce high quality audio (see Kawahara, col. 2, lines 15-17) as would benefit the image processing apparatus taught by Maeda, which teaches image and audio data corresponding to the ROI. Further, the combination would allow the system taught by Maeda to produce high quality audio for the ROI representing the audio and image.

However, Maeda and Kawahara do not specifically disclose the selectively setting of a region of frames n.

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have a setting, which selectively selects a part of a region for each frame/frames. The motivation to select a region in a frame is since a video consists of images presented on separate frames. Thus, it would have been obvious that the ROI chosen by the user in this reference will choose a region in a frame (see Maeda, page 6, [0102], lines 1-2).

5. Claims 4, 6, 7, 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda in view of Kawahara, as applied to claim 1 above, and further in view of Fumiaki (JP Pub 2001-230947, see English Translation done by Machine Translation).

As to claims 4 and 13, Maeda and Kawahara teach wherein compression encoding of audio data during the period for which audio data (see Maeda, page 12, [0204], line 1-3) is processed with high acoustic quality (e.g. This is referring to the ROI set by the user).

However, Maeda and Kawahara do not specifically disclose the invalidating of audio encoding (e.g. It should be noted that this was interpreted as not performing encoding for the ROI region).

Fumiaki does disclose the compression coding being performed for the ROI region and no compression coding being performed in the non-ROI region of the image data (see Fumiaki, page 6, [0070], lines 1-6) (e.g. In the Maeda

reference audio data is appended to image data and thus the ROI selected by the user will encode audio for the ROI).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the audio encoding taught by Maeda and Kawahara with the selective process of encoding taught by Fumiaki. The motivation to have combined the two references involve the use of JPEG2000 for image encoding, which gives priority to the higher order bit plane at time of coding (see Fumiaki, page 6, [0070], lines 3-4) (e.g. Since the image data is appended with audio, the invalidation of the image data also applies to the portion of audio data since only this portion of the ROI is desired and the audio data is reproduced for this segment data (see Maeda, page 14, [0233], line 10-14).

As to claims 6, 7, 15, and 16, Maeda and Kawahara teaches an image processing method and apparatus, which encodes image and audio data with the use of a setting to encode specific data for quality purposes.

However, Maeda and Kawahara do not specifically disclose wherein image encoding setting makes the setting to encode a region.

Fumiaki does disclose an image encoding (see page 6, [0070], line 7) setting means to encode a region including an object (see page 1, [0006], lines 1-2 and page 7, [0080], line 2) (e.g. It is seen that automatic setting is done for obtaining ROI), with the higher image quality including the object (see page 6,

[0070], line 6) and the ROI region is encoded (see page 6, [0070], line 4) (e.g. Once the ROI is determined encoding is done as seen from this reference).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the image processing method and apparatus taught by Kawahara with the automatic ROI setting as taught by Fumiaki. The motivation to have combined the two references includes the savings of time and effort, which may occur when an individual sets up and ROI (see Fumiaki, page 1, [0004], lines 1-3 and [0006], lines 1-2).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwamura (US 7,106,906) is cited to disclose generation of moving image based on selected portions of image by the user along with audio data utilizing MPEG-4 schemes. Nagasaki (US 2002/0054710) is cited to disclose controlling audio and image data output.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paras Shah whose telephone number is (571)270-1650. The examiner can normally be reached on MON.-THURS. 7:30a.m.-4:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.S.

10/31/2007

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